# simplifying Compliance

Anaerobic
Digestion:
Regulatory Drivers

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environmental compliance assistance program

### **Water Quality**

- Ag Water Quality Act
  - Division of Conservation
  - The goal of the act is to protect surface and groundwater resources from pollution as a result of agriculture and silviculture (forestry) activities.
  - Nutrient Management Plans
- Kentucky No Discharge Operational Permits issued by Ky Division of Water
  - http://www.lrc.ky.gov/kar/401/005/005.htm
- Increasing attention (EPA) to nutrient loading on the waters of the Commonwealth



### **Compliance Problems**

- Management of Lagoons
  - Lagoon Design
  - Capacity problems
  - Leaking lagoons
- Spray Irrigation Problems
  - Application rate
  - Contractor practices
  - Seasonal problems



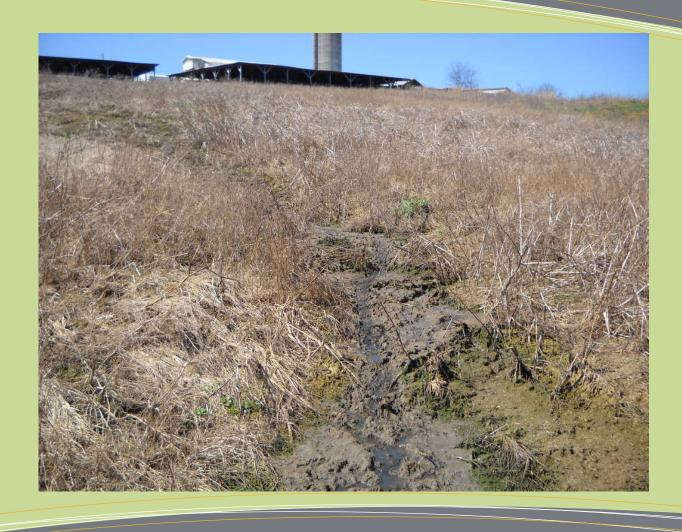
- If you cannot operate your manure management system in compliance with permit conditions and without degrading the waters of the commonwealth, then an alternative management system may be appropriate
- Mismanagement can have serious human health impacts
  - E-coli
  - Fecal Coliform



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# **Example Issues**



















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#### The Consequences

- The 1993 Milwaukee Cryptosporidium
   outbreak was a significant distribution of the
   <u>Cryptosporidium</u> protozoan in Milwaukee,
   <u>Wisconsin</u>, and the largest waterborne disease outbreak in documented <u>United States</u> history.
  - http://animal.discovery.com/videos/monsters-insideme-cryptosporidium-outbreak.html
  - initially it was determined to be caused by the cattle genotype versus human genotype of the parasite as originally suggested



#### Greenhouse Gas (GHG) Issues

- Endangerment Finding
  - EPA's determination that greenhouse gas emissions are "reasonably ... anticipated to endanger human health and welfare"
- So, What's the Big Deal?
  - EPA has the authority to regulate GHG
  - It's not a done deal!



### **GHG** (Continued)

- GHG Mandatory Reporting Rule (GHG MRR)
  - Report only
- Tailoring Rule
  - Permitting of GHG



#### **GHG MRR**

- Requires reporting of greenhouse gas (GHG) emissions from all sectors of the economy in the United States
- Provides accurate and timely data to inform future climate change policies and programs
- Does not require control of GHG



#### Who Reports?

- A facility must evaluate each source category to assess applicability to the rule. "All-in" source categories: All of the facilities that have an "all-in" source category within their boundaries are subject to the rule.
- Threshold categories: Aggregate these categories to assess the 25,000 metric tons CO2e per year reporting threshold



### When to Report and How?

- Electronic Reporting to EPA
  - Note: There is no state reporting requirement nor does Ky DAQ report GHG to EPA for facilities
- Monitoring begins January 1, 2010; first reports due March 31, 2011



## **Permitting of GHG**

- On December 23, 2010, the U.S. Environmental Protection Agency (EPA) issued a series of rules that put the necessary regulatory framework in place to ensure that
  - 1) industrial facilities can get Clean Air Act permits covering their greenhouse gas (GHG) emissions when needed and
  - 2) facilities emitting GHGs at levels below those established in the Tailoring Rule do not need to obtain federal Clean Air Act permits.



# **Permitting (Continued)**

- EPA has been working with state local agencies since that time to make sure that:
  - All permitting agencies have the authority to permit GHGs or are on the path to have such authority, with EPA serving as the permitting authority in the interim, and
  - Only those sources identified in the tailoring rule the largest emitters of GHGs are required to obtain permits.



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#### What Does All of This Mean?

- Greenhouse gases are on the regulatory radar
- Small sources and farms are not included NOW
  - So, Why reduce GHG emissions if I am not required to?
    - Image: Carbon neutrality/carbon footprint
    - Getting ahead of the game
    - "The right thing to do"
    - It may make operational sense
      - Economic
      - Production capacity



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